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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/455,102	12/06/1999	MICHAEL PERSSON	AN05939P1-US	4651

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EXAMINER
METZMAIER, DANIEL S

ART UNIT	PAPER NUMBER
1796	

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12/31/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 09/455,102	Applicant(s) PERSSON ET AL.	
	Examiner Daniel S. Metzmaier	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 August 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6, 7, 23-28, 30-32, 58, 59, 66-68, 70, 71, 98, 99, 101 and 102 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 23-28, 30, 32, 58, 59, 66-68, 70, 71, 98, 99, 101 and 102 is/are rejected.
- 7) ☒ Claim(s) 7 and 31 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |  |
|---|--|
| <p>1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)</p> <p>2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</p> <p>3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br/>Paper No(s)/Mail Date _____</p> | <p>4) <input type="checkbox"/> Interview Summary (PTO-413)<br/>Paper No(s)/Mail Date. _____</p> <p>5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)</p> <p>6) <input checked="" type="checkbox"/> Other: <u>PTO-2051, Improper RCE.</u></p> |
|---|--|

### **DETAILED ACTION**

Claims 1-4, 6-7, 23-28, 30-32, 58-59, 66-68, 70-71, 98-99, and 101-102 remain in the application.

#### ***Response to Amendment***

1. Applicants filed a Request for Continued Examination (RCE) on 22 August 2007, which was an improper filing because said filing was after a Non-final Office Action. The RCE has been placed in the file but has no effect.

#### ***Claim interpretation***

2. The claims require mixing (i) an aqueous solution of alkali metal silicate with (ii) an aqueous phase of silica-based material having a pH of 7 to 11 and (iii) a metal salt other than an aluminum salt. Applicants (instant page 3, lines 19-28) provide examples of said aqueous phase of silica-based material having a pH of 11 or less, which include among others clays of smectite form and colloidal aluminum-silicate (e.g., clay).

The term microgel has not been specifically defined in the specification and therefore takes its plain meaning in the art, which would be a polysilicate gel of micron or submicron size. It is noted that the claims do not define any particle size of the gel material.

#### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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4. Claims 98, 101 and 102 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 98, 101 and 102; "the aqueous solution of alkali metal silicate" lacks proper antecedent basis in claim 1.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

***Claim Rejections - 35 USC § 103***

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1, 4, 6, 23-24, 26-27, 30, 32, 58-59, 66-68, 70-71, 98 and 101-102 are rejected under 35 U.S.C. 103(a) as obvious over Kaliski, US 5,116,418. Kaliski (examples) discloses mixing very fine particle kaolin clay slurries (60 or 70 wt% solids,

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which are aluminosilicates, i.e., silica-based material having a pH of 7 to 11, instant claimed component (ii)) with aqueous sodium silicate (instant claimed component (i)) and calcium chloride (instant component (iii)) and sodium aluminates to form complex functional microgels. The pH values and the  $\text{SiO}_2\text{:M}_2\text{O}$  ratio of the components would have been inherent to those available.

Kaliski differs from the specific pH or the  $\text{SiO}_2\text{:M}_2\text{O}$  ratio of the specific components some variation would have been expected as a known rate determining variable as taught by Kaliski at column 11, lines 11-50. Furthermore, claim 1 sets forth the use of ammonium silicates as well as alkali metal silicates, a ratio of silicates to aluminates and zincates of 1:10 to 10:1, and concentrations of silicates of 0.1 to 2 weight % with as little as 0.5 weight % polyvalent metal salts, i.e., calcium chloride. Said ranges would overlap the 3:1 to 20:1 ratio claimed. Said ratio has not been shown to be critical to the invention. Kaliski (column 11 and claim 22) further discloses working pH of 3.5 to 12.

### ***Double Patenting***

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

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A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claims 1-4, 6, 23-28, 30, 32, 58-59, 66-68, 70-71, 98, 101 and 102 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-20 of U.S. Patent No. 7,169,261. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant claims encompass and/or substantially overlap the '261 claims. The instant claims require a metal salt other than aluminum. This reads on the addition of sodium silicate, which is a sodium salt of silicic acid. Furthermore and as shown in example 2, which the claims read on, the sols may further be alkalized by the addition of sodium hydroxide (a metal salt other than aluminum, see instant claim 2). The S-value is the degree of aggregation or microgel formation. See also column 2, lines 33 et seq, of '261.

Furthermore, the claims are generic to and/or contain boron that is added in the form of an alkali metal borate as disclosed at column 5, line 62, to column 6, line 7.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Allowable Subject Matter***

10. Claims 7 and 31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

11. Applicant's arguments filed 22 August 2007 have been fully considered but they are not persuasive.

12. Applicants (page 8) assert Kaliski lacks a disclosure or teaching of using a silica based material having a pH of 7 to 11. This has not been deemed persuasive since Kaliski discloses silicate solutions, which are silica-based materials and (see claim 22) are metered in at a working pH of 3.5 to 12.

13. Applicants (page 9) assert the '261 patented claims are distinct from the instant claims. This has not been deemed persuasive since the S -value is the degree of microgel in a silica sol. The compositions claimed are made by the same or substantially the same methods as instant claimed.

In particular, instant claim 32 is directed to compositions that are drafted in product-by-process format and appear to encompass and to be indistinct from the patented claims as microgels. Perrson et al, US 7,169,261, characterizes said materials as microgels (see at least column 4, line 52).

***Conclusion***

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within


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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel S. Metzmaier whose telephone number is (571) 272-1089. The examiner can normally be reached on 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David W. Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Daniel S. Metzmaier  
Primary Examiner  
Art Unit 1796

DSM



APPLICATION NUMBER

FILING DATE

FIRST NAMED APPLICANT

ATTY. DOCKET NO./TITLE

DATE MAILED:

**NOTICE OF IMPROPER REQUEST FOR CONTINUED EXAMINATION (RCE)**

The request for continued examination (RCE) under 37 CFR 1.114 filed on 08/22/07 is improper for reason(s) indicated below:

- ☐ 1. Continued examination under 37 CFR 1.114 does not apply to an application for a design patent. Applicant may wish to consider filing a continuing application under 37 CFR 1.53(b) or a CPA under 37 CFR 1.53(d).
- ☐ 2. Continued examination under 37 CFR 1.114 does not apply to an application that was filed before June 8, 1995. Applicant may wish to consider filing a continuing application under 37 CFR 1.53(b) or a CPA under 37 CFR 1.53(d).
- ☒ 3. Continued examination under 37 CFR 1.114 does not apply to an application unless prosecution in the application is closed. If the RCE was accompanied by a reply to a non-final Office action, the reply will be entered and considered under 37 CFR 1.111. If the RCE was not accompanied by a reply, the time period set forth in the last Office action continues to run from the mailing date of that action.
- ☐ 4. The request was not filed before payment of the issue fee, and no petition under 37 CFR 1.313 was granted. If this application has not yet issued as a patent, applicant may wish to consider filing either a petition under 37 CFR 1.313 to withdraw this application from issue, or a continuing application under 37 CFR 1.53(b).
- ☐ 5. The request was not filed before abandonment of the application. The application was abandoned, or proceedings terminated on \_\_\_\_\_. Applicant may wish to consider filing a petition under 37 CFR 1.137 to revive this abandoned application.
- ☐ 6. The request was not accompanied by the fee set forth in 37 CFR 1.17(e) as required by 37 CFR 1.114. Since the application is not under appeal, the time period set forth in the final Office action or notice of allowance continues to run from the mailing date of that action or notice.
- ☐ 7. The request was not accompanied by a submission as required by 37 CFR 1.114. Since the application is not under appeal, the time period set forth in the final Office action or notice of allowance continues to run from the mailing date of that action or notice.

**Note:** If a request for a continued prosecution application (CPA) under 37 CFR 1.53(d) has been filed in the utility or plant application (including a previously filed CPA) that was filed on or after May 29, 2000, the request for a CPA has been treated as a RCE because the CPA practice no longer applies to such application. The constructive RCE, however, is improper for reason(s) indicated above.

**A copy of this notice MUST be returned with any reply.**

Direct the reply and any questions about this notice to:

Adellman, Examining Group 1796

(702) 305-1046  
FORM PTO-2051 (Rev. 3/2001)